Arizona Mathematics Standard Performance Level Descriptors
Grade 8

Exceeds the Standard – Students who score in this level illustrate a superior academic performance as evidenced by achievement that is substantially beyond the goal for all students. Students who perform at this level demonstrate a wealth of knowledge, skills, and abilities in fulfillment of the math standard. They can find square roots of perfect squares, classify numbers as rational and irrational, use proportions to solve word problems, calculate surface area, and use scale factors to solve real-world problems.

Meets the Standard – Students who score in this level demonstrate a solid academic performance on subject matter as reflected by the math standard. Students who perform at this level are able to represent rational numbers on a number line, solve problems involving rate, and identify and classify angles created by transversals intersecting parallel lines. They can identify graphical representations of tables of values, apply properties of triangles, and use a variety of strategies to solve logic problems.

Approaches the Standard – Students who score in this level show partial understanding of the knowledge and application of the skills that are fundamental for proficient work. Students who perform at this level show some understanding of the math standard's concepts and procedures by identifying squares of whole numbers, using data to recognize trends and predict probability, recognizing rates of change, extending numeric patterns, identifying congruent angles, and calculating volume of geometric solids. Some gaps in knowledge and skills are evident and may require additional instruction and remediation in order to achieve a satisfactory level of understanding.

Falls Far Below the Standard – Students who score in this level may have significant gaps and limited knowledge and skills that are necessary to satisfactorily meet the state's math standard. Students will usually require a considerable amount of additional instruction and remediation in order to achieve a satisfactory level of understanding.

Students at the "Exceeds the Standard" level generally know the skills required at the "Meets" and "Approaches" levels and are able to:	Students at the "Meets the Standard" level generally know the skills required at the "Approaches" level and are able to:	Students at the "Approaches the Standard" level generally know and are able to:
• Find square roots of perfect squares. • Classify numbers as rational and irrational. • Estimate percents of whole numbers. • Determine all possible arrangements and combinations from data sets. • Analyze graphical representations to determine probability. • Determine appropriate displays by which to represent data. • Use proportions to solve word problems. • Identify rules and equations to create function tables. • Identify graphical representations of equations and function tables. • Extend multiple patterns. • Apply properties of similar triangles. • Calculate surface area. • Use scale factors to solve real-world problems.	• Represent rational numbers on a number line. • Solve problems involving rate. • Identify and classify angles created by transversals intersecting parallel lines. • Identify graphical representations of tables of values. • Apply properties of triangles. • Use a variety of strategies to solve logic problems.	• Identify squares of whole numbers. • Use estimation to solve word problems. • Solve multi-step word problems. • Apply the order of operations. • Use data to recognize trends and predict probability. • Compare outcomes and draw conclusions from of probability experiments. • Find and interpret measures of central tendency. • Extend linear data displays. • Determine all possible combinations of two or more sets of data. • Determine appropriate survey questions. • Solve problems using vertex-edge graphs. • Solve multi-step equations. • Extend numeric patterns. • Evaluate algebraic expressions. • Identify rates of change. • Translate word problems into algebraic notation. • Identify graphs of linear functions. • Identify transformations displayed on coordinate grids. • Identify congruent angles. • Calculate volume of geometric solids.

These descriptors do not include all the skills and knowledge as contained in the Math Standard.